UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,557	02/05/2001	Lawrence R. Foore	2479.2053-000	8189

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HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER
MOLINARI, MICHAEL J

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 07/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _25 March 2002_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-36_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-36_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _4_.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claim 27 is objected to because of the following informalities: Line 1 of the claim recites the limitation "timer manages" but it appears it should be "timer manager". Appropriate correction is required.

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim states that the acknowledgement message is transmitted on the connection (see the end of the claim), but the claim previously only states that the acknowledgement message is expected, not that it is transmitted. It is unclear whether an acknowledgement message is sent or not, according to the claim language.

3.   Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites the limitation "if we determine that", but it cannot be determined who or what is intended by the word "we".

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 34 and 35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5.   Referring to claim 34, a computer program product does not comprise statutory subject matter. Computer programs comprise statutory subject matter when embodied on a medium capable of controlling a computer or device. If the claim were re-written as "a computer-readable medium comprising a computer program", it would constitute statutory subject matter.

6.   Referring to claim 35, a signal does not constitute statutory subject matter. However, if the claim were rewritten as "a device for creating a computer digital signal", it would constitute statutory subject matter.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 1-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al. ("M-TCP: TCP for Mobile Cellular Networks").

9.   Referring to claim 1, Brown et al. disclose a method of monitoring and controlling message delivery from a remote node comprising: establishing a connection with a remote node (see Section 4, line 12); detecting when an incoming message is received from a remote node

(See Section 4.1, line 1); determining a timeout corresponding to the time at which an

acknowledgement message is expected by the remote node in response to the incoming message

(see Section 1.1, lines 12-15); and sending a suppression message to the remote node if the

acknowledgement message has not been sent to the remote node before the timeout expires (see

Section 4.1, lines 14-17; note that the ACK that sets the sender's window size to zero is sent

before the sender experiences a retransmit timeout), wherein the incoming message, the

acknowledgement message, and the suppression message are all transmitted on the connection

(see Section 4, line 12).

10.   Referring to claim 2, Brown et al. disclose that the suppression message suspends

messages from being sent by the remote node (see Section 4.1, lines 14-17).

11.   Referring to claim 3, Brown et al. disclose sending a resume message to the remote node

(see Section 4.1, lines 25-27).

12.   Referring to claim 4, Brown et al. disclose that the resume message is sent when the

acknowledgement message is sent (see Section 4.1, lines 25-27).

13.   Referring to claim 5, Brown et al. disclose that the resume message is the

acknowledgement message (see Section 4.1, lines 25-27).

14.   Referring to claim 6, Brown et al. disclose forwarding the incoming message over a

wireless link to a user (see Section 4.1, line 1).

15.   Referring to claim 7, Brown et al. disclose receiving the acknowledgement from the user

via the wireless link (see Section 4.1, lines 1-2).

16.   Referring to claim 8, Brown et al. disclose sending the suppression message immediately

if we determine that the wireless link was lost (see Section 4.1, lines 14-17).

17.   Referring to claim 9, Brown et al. disclose that determining further comprises determining a round-trip time (see Section 4.1, lines 20-24).

18.   Referring to claim 10, Brown et al. disclose that determining further comprises setting a timer in a timer table (see Section 4.1, lines 20-24).

19.   Referring to claim 11, Brown et al. disclose that sending the suppression message further comprises generating a message segment (see Section 4.1, lines 14-17).

20.   Referring to claim 12, Brown et al. disclose that generating the message segment comprises generating according to a predetermined protocol (see Section 4.1, line 1).

21.   Referring to claim 13, Brown et al. disclose that the predetermined protocol is TCP/IP (see Section 4.1, line 1).

22.   Referring to claim 14, Brown et al. disclose that the suppression message is indicative of an advertised window of zero (see Section 4.1, lines 14-17).

23.   Referring to claim 15, Brown et al. disclose that the detecting and the sending do not require modification of a TCP/IP stack at the user (see Section 4, lines 12-14).

24.   Referring to claim 16, Brown et al. disclose that the determining and detecting occur by reading a transport layer segment from a network layer (see Section 4.1, line 1)

25.   Referring to claim 17, Brown et al. disclose a system for monitoring and controlling message delivery from a remote node comprising: a wireless gateway operable to detect when an incoming message is received from a remote node over a point-to-point connection (Section 4.1, line 1); a timer manager in the wireless gateway operable to determine a timeout corresponding to the time at which an acknowledgement message is expected by the remote node in response to the incoming message (see Section 1.1, lines 12-15); a segment generator in the wireless gateway

responsive to the timeout and operable to generate and send a suppression message to the remote

node if the acknowledgement message has not been sent to the remote node before the timeout

expires (see Section 4.1, lines 14-17; note that the ACK that sets the sender's window size to

zero is sent before the sender experiences a retransmit timeout), wherein the incoming message,

the acknowledgement message, and the suppression message are all adapted to be transmitted on

the point-to-point connection (see Section 4, line 12).

26.   Referring to claim 18, Brown et al. disclose that the suppression message is operable to

suspend messages from being sent by the remote node (see Section 4.1, lines 14-17).

27.   Referring to claim 19, Brown et al. disclose that the segment generator is further operable

to generate and send a resume message to the remote node, wherein the resume message is

operable to allow messages to be sent by the remote node (see Section 4.1, lines 25-27).

28.   Referring to claim 20, Brown et al. disclose that the segment generator is operable to

send the resume message when the acknowledgement message is sent (see Section 4.1, lines 25-

27).

29.   Referring to claim 21, Brown et al. disclose that the resume message is the

acknowledgement message (see Section 4.1, lines 25-27).

30.   Referring to claim 22, Brown et al. disclose that the wireless gateway is operable to

forward the incoming message over a wireless link to a user (see Section 4.1, line 1).

31.   Referring to claim 23, Brown et al. disclose that the wireless gateway is further operable

to receive the acknowledgement from the user via the wireless link (see Section 4.1, lines 1-2).

32.   Referring to claim 24, Brown et al. disclose that the wireless gateway further comprises a

link detector operable to determine if the wireless link is lost (see Section 4.1, lines 12-17).

33.   Referring to claim 25, Brown et al. disclose that the link detector is further operable to

direct the segment generator to send the suppression message immediately if the link detector

detects that the wireless link is lost (see Section 4.1, lines 12-17).

34.   Referring to claim 26, Brown et al. disclose that the timer manager is further operable to

determine a round-trip time (see Section 4.1, lines 20-24).

35.   Referring to claim 27, Brown et al. disclose that the timer manager is further operable to

set a timer corresponding to the round-trip time in a timer table (see Section 4.1, lines 20-24).

36.   Referring to claim 28, Brown et al. disclose that sending the suppression message further

comprises generating a message segment (see Section 4.1, lines 14-17).

37.   Referring to claim 29, Brown et al. disclose that the segment generator generates the

message segment according to a predetermined protocol (see Section 4.1, line 1).

38.   Referring to claim 30, Brown et al. disclose that the predetermined protocol is TCP/IP

(see Section 4.1, line 1).

39.   Referring to claim 31, Brown et al. disclose that the suppression message is indicative of

an advertised window of zero (see Section 4.1, lines 14-17).

40.   Referring to claim 32, Brown et al. disclose that the TCP/IP stack corresponding to the

remote node is not modified by the wireless gateway (see Section 4, lines 12-14).

41.   Referring to claim 33, Brown et al. disclose that the timer manager is operable to read a

network layer segment from a transport layer (see Section 4.1, line 1).

42.   Referring to claim 34, Brown et al. disclose a computer program product including

computer program code for monitoring and controlling message delivery from a remote node

comprising: computer program code for establishing a point-to-point connection with a remote

node (see Section 4, line 12); computer program code for detecting when an incoming message is received from a remote node (See Section 4.1, line 1); computer program code for determining a timeout corresponding to the time at which an acknowledgement message is expected by the remote node in response to the incoming message (see Section 1.1, lines 12-15); and computer program code for sending a suppression message to the remote node if the acknowledgement message has not been sent to the remote node before the timeout expires (see Section 4.1, lines 14-17; note that the ACK that sets the sender's window size to zero is sent before the sender experiences a retransmit timeout), wherein the incoming message, the acknowledgement message, and the suppression message are all transmitted on the connection (see Section 4, line 12).

43.   Referring to claim 35, Brown et al. disclose a computer data signal for monitoring and controlling message delivery from a remote node comprising: program code for establishing a point-to-point connection with a remote node (see Section 4, line 12); program code for detecting when an incoming message is received from a remote node (See Section 4.1, line 1); program code for determining a timeout corresponding to the time at which an acknowledgement message is expected by the remote node in response to the incoming message (see Section 1.1, lines 12-15); and program code for sending a suppression message to the remote node if the acknowledgement message has not been sent to the remote node before the timeout expires (see Section 4.1, lines 14-17; note that the ACK that sets the sender's window size to zero is sent before the sender experiences a retransmit timeout), wherein the incoming message, the acknowledgement message, and the suppression message are all transmitted on the connection (see Section 4, line 12).

44.   Referring to claim 36, Brown et al. disclose a system for monitoring and controlling

message delivery from a remote node comprising: means for establishing a point-to-point

connection with a remote node (see Section 4, line 12); means for detecting when an incoming

message is received from a remote node (See Section 4.1, line 1); means for determining a

timeout corresponding to the time at which an acknowledgement message is expected by the

remote node in response to the incoming message (see Section 1.1, lines 12-15); and means for

sending a suppression message to the remote node if the acknowledgement message has not been

sent to the remote node before the timeout expires (see Section 4.1, lines 14-17; note that the

ACK that sets the sender's window size to zero is sent before the sender experiences a retransmit

timeout), wherein the incoming message, the acknowledgement message, and the suppression

message are all transmitted on the connection (see Section 4, line 12).

Conclusion

45.   The prior art made of record and not relied upon is considered pertinent to applicant's
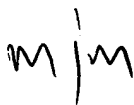
disclosure.

46.   U.S. Patent No. 6,208,620 to Sen et al. teaches a method of managing a TCP/IP

connection that includes wireless mobile nodes that is very similar to that taught by Brown et al.

47.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael J Molinari whose telephone number is (703) 305-5742.

The examiner can normally be reached on Monday-Thursday 8am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy Vu can be reached on (703) 308-6602. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Joseph Molinari

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PRIMARY EXAMINER

07-16-04